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ABSTRACT

Four-year state colleges and universities belonging to the American Association of State Colleges and Universities (AASCU) and the National Association of State Universities and Land Grant Colleges (NASULGC) participated in a national survey used to gather information concerning the involvement of such institutions in less-than-baccalaureate level technical education. Data for the study were collected from the presidents of each of 429 institutions through the use of information forms pertaining to both off-campus and on-campus programs. Analysis of the data indicated that (1) member institutions of AASCU and NASULGC are involved to a considerable extent in less-than-baccalaureate technical programs, and their involvement increased sharply during the period 1967-71 and again by 1975, (2) the less-than-baccalaureate programs offered in the participating institutions were mainly 2-year programs as are those programs currently in the planning stage, and (3) the most significant trend in the development of less-than-baccalaureate level technical programs continues to be the very sharp increase in both the number of programs offered and the student enrollment in these programs. Fourteen supplementary tables are included. (TA)

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LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAM IN FOUR-YEAR PUBLIC COLLEGES AND UNIVERSITIES

A study conducted by

Eastern Kentucky University

In Cooperation with the

American Association of State Colleges and Universities

and the

National Association of State Universities and Land-Grant Colleges

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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January 22, 1976

Traditionally, four-year colleges and universities have offered exclusively baccalaureate and above degree programs of liberal arts and professional studies. While many Americans may believe that this is still the case, a trend in recent years has changed this tradition, particularly in the public colleges and universities.

The accompanying study by John Rowlett of Eastern Kentucky University is based on a survey of colleges and universities which belong to either the American Association of State Colleges and Universities or to the National Association of State Universities and Land-Grant Colleges. While all are four-year institutions, many with graduate programs, Rowlett found that almost half of the institutions which participated in the study offered less-than-baccalaureate technical programs.

The technical and occupational programs surveyed by Rowlett fall into eight broad areas of study: environment and sciences; business; education; agronomy and animal husbandry; public service; mechanical and engineering technology; computer and electronics technology; health; and the services. Within these eight general areas, students may pursue specialized courses of study--many of which serve a corresponding personnel and technical need within the labor market--which a decade ago were available in few colleges and universities. The range of the specialized studies is enormous, for example, to name just a few: petroleum technology, water quality and pollution control, hotel management, merchandising, day care and nursery management, educational media technician, dairy herd management, agriculture supply, community services, fire service and safety, building construction technology, machine design, airframe and power plant technology, computer technology, nuclear medicine technician, cytotechnology, commercial art, and touristry service technology.

The occupational and technical programs of two and three years duration generally lead to associate degrees; the less frequent programs of six months or one year training and study periods generally result in certification. For the colleges and universities involved, the less-than-baccalaureate technical programs are an important part of the overall concept of career education. The programs for the most part do provide specialized education for circumscribed positions. But, because the student received the technical education at a four-year institution, the student may more easily pursue further study at that institution, perhaps earning a baccalareate degree or higher which would enable him or her to advance in the specialized field or assume administrative duties. The combination of the technical education within the framework of general education offered by the four-year colleges and universities minimizes the risk of "terminal education" or "terminal jobs" and enhances the opportunities for the further growth and development which should characterize career education.

The accompanying report details the status of less-than-baccalaureate programs on state college and university campuses, including the growth in the number of programs, student enrollment, and program duration.

A directory of less-than-baccalaureate programs will be published this spring.

Additional copies of this study may be obtained by writing to either:

American Association of State Colleges and Universities, One Dupont Circle, Suite 700, Washington, D.C. 20036

National Association of State Universities and Land-Grant Colleges, One Dupont Circle, Suite 710, Washington, D.C. 20036

January, 1976

FOREWORD

The results of this study are provided as an indication of the current involvement of institutions of higher education in technical education programs of less-than-baccalaureate level. The rapid growth in programs and enrollments since our 1967 and 1971 studies indicate that a large and increasing number of AASCU and NASULGC institutions have and are continuing to make commitments to programs of less-than-baccalaureate level.

Credit is due Mr. Allan W. Ostar, Executive Director, American Association of State Colleges and Universities, and Dr. John D. Rowlett, Vice President for Academic Affairs and Research, Eastern Kentucky University, for their initial and continuing interest and support throughout this project. Credit is also due Dr. William E. Sexton, Vice President for Public Services and Special Programs, Eastern Kentucky University, and Dr. Albert Spencer, Department of Industrial Education, Eastern Kentucky University, who were involved in the initial studies, and to Dean Jack Luy, who conducted the present study.

Finally, I wish to acknowledge my special indebtedness to the individual representatives of the many colleges and universities who provided the data for this report. Without their interest and assistance, this project would not have been possible.

ROBERT R. MARTIN, President
Eastern Kentucky University

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INTRODUCTION

In cooperation with the American Association of State Colleges and Universities (AASCU) and the National Association of State Universities and Land-Grant Colleges (NASULGC), Eastern Kentucky University has conducted studies to ascertain the status of less-than-baccalaureate level technical education programs in public four-year colleges and universities. These similarly designed studies conducted in 1967, 1971, and again in 1975, when viewed in total, provide an overall picture of the continuing commitment of AASCU and NASULGC institutions toward the provision of these types of educational programs.

Many believe that only post-secondary vocational schools and community/junior colleges are concerned with the provision of less-than-baccalaureate level technical programs. In reality, however, the nature, extent, and involvement of four-year institutions in making these types of programs available has been of relatively long standing. Unfortunately, there has been little concrete information made public regarding these programs in public four-year state colleges and universitites. This study, along with its predecessors, presents vital information concerning the extent of the involvement of these institutions in less-than-baccalaureate level technical education.

More specifically, the study attempted to answer the following questions:

1. To what extent are member institutions of the AASCU and the NASULGC involved in technical education programs of less-than-baccalaureate level on the main campus and in off-campus centers?

2. What is the nature of current technical education programs of less-than-baccalaureate level in terms of duration and student enrollment?

3. What are the plans for the addition of less-than-baccalaureate level technical education programs in AASCU and NASULGC institutions?

4. To what extent have technical education programs of less-than-baccalaureate level increased or decreased since 1967?

5. What trends can be identified regarding the development of technical education programs of less-than-baccalaureate level during the period 1967-75?

Definition of Terms

For the purposes of this study, technical education programs were defined as those occupational curricula that combine general education with technical information and practical skill development experiences necessary for individuals who wish to enter into and subsequently succeed in occupations that require an understanding of the laws of science and technology and their application in our society.[1]

Limitations of the Study

This study was limited to the 429 colleges and universities in the United States and its territorial possessions classified as members of the American Association of State Colleges and Universities (AASCU) and the National Association of State Universities and Land Grant Colleges (NASULGC).

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[1]Technical Education: Less-than-Baccalaureate Level Programs in Higher Education, Eastern Kentucky University, 1967 and Less-than-Baccalaureate Level Technical Education Programs in Higher Education, Eastern Kentucky University, 1971.

The study was also limited to the extent that the participating institutions accurately represented the entire population of such institutions included in the study.

The accuracy of the data was limited to the extent that the respondents correctly interpreted and supplied valid responses to the items on the information forms. Comparisons of the results of this study and those of the similar studies carried out in 1967 and 1971 were limited to the extent that the populations and respondent groups for the two studies were not identical. The 1967 study was based on responses from 282 institutions, of a population of 367, the 1971 study was based on responses from 328 institutions, of a population of 412, and the current study was based on responses from 400 institutions, of a population of 429.

SOURCE OF DATA AND METHOD OF STUDY

Population

Members of the American Association of State Colleges and Universities and the National Association of State Universities and Land Grant Colleges were invited to participate in the study. Each of the Presidents of these institutions was mailed an introductory letter[2], a copy of a letter of support from the Executive Director of either AASCU or NASULGC[3], a copy of "Information Form for Technical Education Programs of Less-than-Baccalaureate Level Offered On the Main Campus", (Form A-1)[4], a copy of "Information Form for Technical Education Programs of Less-than-Baccalaureate Level Offered Off Campus in Extension Centers, Community Colleges, Et Cetera" (Form A-2)[5],

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[2]See Appendix A
[3]See Appendix B
[4]See Appendix C
[5]See Appendix D

a copy of "Less-than-Baccalaureate Level Technical Programs Currently Offered on the Main Campus" (Form B-1),[6] a copy of "Less-than-Baccalaureate Level Technical Programs Currently Offered at Off-Campus Extension Centers, Community Colleges, etc.," (Form B-2),[7] and an addressed return envelop. In addition, two follow-up mailings were made.[8,9]

Of the 429 institutions contacted, 400 or 93.2 per cent completed usable returns, as indicated in Table I. (See page 5) Three institutions (one AASCU and two NASULGC) returned their completed forms too late for inclusion in the tabulation of the data.

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[6]See Appendix E

[7]See Appendix F

[8]See Appendix G

[9]See Appendix H

TABLE I

DISTRIBUTION OF ELIGIBLE AND PARTICIPATING INSTITUTIONS

State or Territory	Number of AASCU Institutions		Number of NASULGC Institutions		Total		Per Cent of Response
	Eligible and Contacted	Partici-pated	Eligible and Contacted	Partici-pated	Eligible and Contacted	Partici-pated	
Alabama	6	5	4	4	10	9	90.0
Alaska	1	1	1	1	2	2	100.0
Arizona	1	1	2	2	3	3	100.0
Arkansas	6	6	2	1	8	7	87.5
California	18	16	9	9	27	25	92.6
Colorado	7	7	2	2	9	9	100.0
Connecticut	4	4	2	1	6	5	83.3
Delaware	0	0	2	2	2	2	100.0
District of Columbia	2	2	0	0	2	2	100.0
Florida	6	6	3	3	9	9	100.0
Georgia	10	8	3	3	13	11	84.6
Guam	0	0	1	1	1	1	100.0
Hawaii	0	0	1	1	1	1	100.0
Idaho	3	3	1	1	4	4	100.0
Illinois	9	8	3	3	12	11	91.7
Indiana	2	2	2	2	4	4	100.0
Iowa	1	1	2	2	3	3	100.0
Kansas	4	4	2	2	6	6	100.0
Kentucky	5	5	2	2	7	7	100.0
Louisiana	8	7	2	1	10	8	80.0

TABLE I (Continued)

DISTRIBUTION OF ELIGIBLE AND PARTICIPATING INSTITUTIONS

State or Territory	Number of AASCU Institutions		Number of NASULGC Institutions		Total		Per Cent of Response
	Eligible and Contacted	Participated	Eligible and Contacted	Participated	Eligible and Contacted	Participated	
Maine	7	7	1	1	8	8	100.0
Maryland	8	8	2	0	10	8	80.0
Massachusetts	12	10	3	2	15	12	80.0
Michigan	9	9	4	4	13	13	100.0
Minnesota	7	7	1	1	8	8	100.0
Mississippi	5	5	3	3	8	8	100.0
Missouri	7	7	2	1	9	8	88.9
Montana	4	4	2	2	6	6	100.0
Nebraska	5	5	1	1	6	6	100.0
Nevada	1	0	1	1	2	1	50.0
New Hampshire	2	2	1	1	3	3	100.0
New Jersey	10	9	1	1	11	10	90.9
New Mexico	1	1	2	2	3	3	100.0
New York	16	15	6	6	22	21	95.5
North Carolina	11	11	3	3	14	14	100.0
North Dakota	4	3	2	2	6	5	83.3
Ohio	7	7	3	3	10	10	100.0
Oklahoma	7	5	3	3	10	8	80.0
Oregon	4	3	2	2	6	5	83.3
Pennsylvania	17	17	3	3	20	20	100.0

TABLE I (Continued)

DISTRIBUTION OF ELIGIBLE AND PARTICIPATING INSTITUTIONS

State or Territory	Number of AASCU Institutions		Number of NASULGC Institutions		Total		Per Cent of Response
	Eligible and Contacted	Partici-pated	Eligible and Contacted	Partici-pated	Eligible and Contacted	Partici-pated	
Puerto Rico	0	0	1	1	1	1	100.0
Rhode Island	1	1	1	1	2	2	100.0
South Carolina	4	4	3	3	7	7	100.0
South Dakota	4	4	2	2	6	6	100.0
Tennessee	8	8	2	1	10	9	90.0
Texas	17	16	6	5	23	21	91.3
Utah	2	2	2	1	4	3	75.0
Vermont	3	3	1	1	4	4	100.0
Virgin Islands	0	0	1	0	1	0	0.0
Virginia	11	10	3	3	14	13	92.9
Washington	4	4	2	2	6	6	100.0
West Virginia	9	9	1	1	10	10	100.0
Wisconsin	9	9	2	2	11	11	100.0
Wyoming	0	0	1	1	1	1	100.0
Total	309	291	120	109	429	400	93.2

Treatment of Data

The source of data was the completed information forms and explanatory letters received from the 400 participating institutions. The data were classified in four categories, based on the enrollment of the participating institutions, (1) less than 5,000 (2) 5,000 - 10,000, (3) 10,000 - 15,000, and (4) over 15,000. This was done in order to make the presentation of the data more meaningful and to make the results more useful to interested institutions. For similar reasons, the institutional data were classified according to their membership in the two organizations involved, the AASCU and the NASULGC. Further classification was made according to the nature and purpose of the individual tables.

The distribution of participating institutions by enrollment and institutional classification is presented in Table II.

TABLE II

ENROLLMENT SIZE AND CLASSIFICATION OF PARTICIPATING INSTITUTIONS

Institutional Enrollment	AASCU	NASULGC	Total
Less than 5,000	146	16	162
5,000 - 10,000	85	19	104
10,000 - 15,000	37	14	51
Over 15,000	23	60	83
Total	291	109	400

STATUS OF LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAMS IN FOUR-YEAR COLLEGES AND UNIVERSITIES

Status of Current Technical Education Programs

Of the 400 participating institutions, 304 (76 per cent) offered technical education programs, as indicated in Table III, (see page *10*). The 1967 and 1971 studies indicated that 65.6 and 65.5 per cent respectively of responding institutions offered technical education.

One hundred-sixteen, or 29 per cent of the institutions, offered technical education at the baccalaureate level only. This compares with 25.2 per cent in 1967 and 22.2 per cent in 1971.

Less-than-baccalaureate level programs were offered in 188 institutions, 47 per cent of those participating. The corresponding figures for 1967 were 114 institutions, 40.4 per cent of the total and 142 institutions (43.4 per cent) in 1971. Of the 188 institutions offering less-than-baccalaureate level programs, 129 (68.6 per cent) were AASCU institutions. This was 44.3 per cent of the total number (291) of responding AASCU institutions. NASULGC institutions offering such programs totaled 59, or 54.1 per cent of the 109 that responded.

Table III also indicates that less-than-baccalaureate level technical education programs were available in 46.2 per cent of the institutions with enrollments of 10,000 or less, whereas 48.5 per cent of institutions with enrollments of over 10,000 had such programs available. In 1967, 32.2 per cent and in 1971, 40.3 per cent, of the less-than-10,000 group offered less-than-baccalaureate level programs, while 53.6 per cent and 50.5 per cent respectively of the over-10,000 group offered such programs. This would tend to indicate a substantial increase in the percentage of smaller institutions offering less-than-baccalaureate level technical education programs, and a slight decrease in the percentage of larger institutions offering such programs since 1967.

TABLE III

LEVEL OF TECHNICAL EDUCATION PROGRAMS OFFERED ON AND OFF THE MAIN CAMPUS IN PARTICIPATING INSTITUTIONS*

	Number of Institutions by Enrollment						
	Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000	Total	Percent of Totals (AASCU - 291 NASULGC - 109)	Percent of Combined Totals (400)
Baccalaureate level only							
On Campus	30 (6)	29 (4)	14 (4)	11 (14)	84 (28)	28.8 (25.7)	28
On and Off Campus		3		(1)	3 (1)	1.03 (.9)	1.0
Less-than-baccalaureate level only							
On Campus	29 (1)	6 (3)		(9)	35 (13)	12 (12)	12
Off Campus	2		1	(5)	3 (5)	1.03 (4.6)	2
On and Off Campus		1		(4)	1 (4)	.3 (3.7)	1.3
Both levels							
On Campus	34 (6)	24 (3)	12 (4)	5 (9)	75 (22)	25.8 (20.2)	24.3
Off Campus		1		(1)	1 (1)	.3 (.9)	0.5
On and Off Campus	3 (1)	4 (3)	1 (2)	(3)	8 (9)	2.7 (8.3)	4.3

TABLE III (Continued)

LEVEL OF TECHNICAL EDUCATION PROGRAMS OFFERED ON AND OFF THE MAIN CAMPUS IN PARTICIPATING INSTITUTIONS*

Program Leval	Number of Institutions by Enrollment: Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000	Total	Percent of Totals (AASCU - 291, NASULGC -109)	Percent of Combined Totals (400)
Baccalaureate level on campus, less-than-baccalaureate off campus				(2)	(2)	(1.8)	0.5
Both levels on campus, less-than baccalaureate level off campus	1	1	2 (1)	2 (1)	6 (2)	2.1 (1.8)	2
Both levels on campus, baccalaureate level off campus				(1)	(1)	(.9)	0.3
No technical education offered	47 (2)	16 (6)	7 (3)	5 (10)	75 (21)	25.8 (19.3)	24
TOTAL	146 (16)	85 (19)	37 (14)	23 (60)	291 (109)	100 (100)	100

* Figures for NASULGC Institutions in parentheses

Current Offerings and Program Duration

Data presented in Table IV reveal that a total of 2123 less-than-baccalaureate level technical education programs were offered in 1975. This indicates a dramatic increase of 242.9 per cent over 1967 when 619 such programs were reported and a 93.5 per cent increase over the 1097 programs offered in 1971. The 1462 less-than-baccalaureate programs in AASCU institutions accounted for 68.9 per cent of the total.

Table IV also indicates that a great majority, 72.9 per cent, of the less-than-baccalaureate programs were of two years duration. One-year programs accounted for an additional 11.1 per cent of the total. In combination, then it is apparent that the 84 per cent concentration at these two levels constitute the major program thrust of the less-than-baccalaureate offerings. These figures compare with relative closeness to the concentrations of 88.7 per cent reported in 1967 and the 85.9 per cent in 1971.

The 1549 two-year programs reported in 177 institutions have increased significantly from the 505 programs in 108 institutions in 1967 and from 859 programs in 132 institutions in 1971. This represents a program increase of 206.7 per cent since 1967 and 80.3 per cent since 1971. Similarly the number of institutions offering two-year programs has increased 63 per cent since 1967 and 34.1 per cent since 1971. AASCU institutions have exhibited the highest portion of the change with respect to two-year programs, moving from 546 in 1971 to 1038 in 1975, a percentage gain of 90.1, while NASULGC

institutions have moved from 313 programs in 1971 to 511 in 1975 for a 63.3 per cent increase.

The number of two-year offerings per institution ranged from 1 - 91 with a mean of approximately 8.7, an increase from the 1971 range of 1 - 45 and mean of approximately 6.7

TABLE IV

DURATION OF PROGRAMS PRESENTLY OFFERED IN PARTICIPATING INSTITUTIONS*

	Number of Programs In Institutions with Enrollments of							
Duration	Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000	Total	Number of Institutions	Range	Mean
More than 3, less than 4 years	2		2	(2)	4 (2)	2 (1)	2 (2)	2 (1)
3 years	12 (1)	22 (1)	(1)	3 (18)	37 (21)	14 (7)	1-3 (1-4)	2.6 (3)
2 years	473 (45)	310 (83)	184 (28)	71 (355)	1038 (511)	120 (57)	1-44 (1-91)	8.7 (9)
More than one less than two yrs.	2 (1)	43	44 (3)	(35)	89 (39)	7 (5)	1-22 (1-23)	12.7 (7.8)
1 year	58 (8)	82 (5)	23 (16)	7 (37)	170 (66)	45 (21)	1-11 (1-13)	3.8 (3.1)
1/2 year	4 (1)	10	(1)	(2)	14 (4)	7 (3)	1-4 (1-2)	2 (1.3)
Less than 1/2 year	8 (10)	100 (1)	1 (2)	1 (5)	110 (18)	11 (7)	1-85 (1-9)	10 (2.6)
TOTAL	559 (66)	567 (90)	254 (51)	82 (454)	1462 (661)	206 (101)	1-85 (1-91)	7.1 (6.5)

*Figures for NASULGC Institutions in parentheses

Student Enrollment in Present Programs

Data revealed in Table V indicate that 105,931 enrollments were reported for less-than-baccalaureate level programs in 1975. From 1967 when a total of 35,551 enrollments were reported, the number increased to 57,145 in 1971, an increase of 81.1 per cent. The number of total enrollments in 1975 represents an increase of 85.4 per cent over 1971 and 235.7 per cent over 1967. In addition to this increase, the 1975 total does not include enrollments in 171 programs for which such data were not reported.

Enrollments in these programs within the AASCU institutions rose from 32,363 in 1971 to 50,795 in 1975, an increase of 56.9 per cent while enrollments in NASULGC institutions during the comparable period increased from 24,782 to 55,136 or 122.5 per cent.

In terms of enrollments in two year programs, 25,668 students were reported in 1967. This number increased to 52,808 in 1971 and to 92,442 in 1975 revealing a 260.1 per cent increase over 1967 and a 75.1 per cent increase over 1971. Since 1549 two-year programs were reported, the average per program enrollment in 1975 was in excess of 59. AASCU institutions reported enrollment increases from 25,128 in 1971 to 44,107 in 1975, or a 75.5 per cent increase and NASULGC institutions reported increases from 27,680 in 1971 to 48,335 in 1975, an increase of 74.6 per cent.

The data indicate that a great majority of all enrollments, 87.3 per cent, were in two year programs in 1975. Two year enrollments in AASCU institutions accounted for 86.8 per cent of the total and for NASULGC institutions, 87.6 per cent. Although slight increases were shown, the data compare closely with 1971 and 1967 when 83.8 per cent and 81.4 per cent respectively were enrolled in two year programs.

TABLE V

STUDENT ENROLLMENT IN PRESENT PROGRAMS*

Duration of Program	Student Program Enrollment In Institutions with Enrollment				Total Program Enrollment	No Enrollment Data Given
	Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000		Total Number of Programs
More than 3, Less than 4 years	12		48	(50)	60 (50)	
3 years	532 (90)	796 (5)	(42)	25 (1110)	1353 (1247)	16 (1)
2 years	13807 (1413)	12984 (1641)	9970 (2969)	7346 (42312)	44107 (48335)	112 (6)
More than one Less than two yrs.	75 (20)	88	300 (70)	(2447)	463 (2537)	12
1 year	904 (100)	1499 (47)	1063 (304)	286 (1050)	3752 (1501)	12 (3)
1/2 year	65 (20)	43	(36)	(479)	108 (535)	7
Less than 1/2 year	195 (120)	382 (10)	125 (33)	250 (768)	952 (931)	2
Total	15590 (1763)	15792 (1703)	11506 (3454)	7907 (48216)	50795 (55136)	161 (10)

*Figures for NASULGC Institutions in parentheses

Addition or Expansion of Less-Than-Baccalaureate Level Technical Programs in Institutions Currently Offering Such Programs

Institutions currently offering less-than-baccalaureate level technical programs were asked whether or not they planned to add additional programs or expand existing ones by 1978. Those who planned to add or expand were asked to indicate the nature of the programs to be added or expanded, and the year this was to be done. Those who did not plan to add or expand existing programs were asked to indicate reasons for not doing so.

Table VI indicates that 91, or 48.1 per cent, plan to add or expand programs. However, 62 institutions (32.8 per cent). indicated that they were not sure whether programs would be added or expanded or failed to respond to the question. The 1967 study indicated that at that time, 49.1 per cent of the participating institutions offering less-than-baccalaureate level programs planned to expand them or add others by 1970, whereas the 1971 study revealed that 43.7 per cent planned additions or expansions.

TABLE VI

ADDITION OR EXPANSION OF LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAMS IN INSTITUTIONS PRESENTLY OFFERING SUCH PROGRAMS*

Institutional Enrollment	Plan to Add or Expand Programs	Do Not Plan to Add or Expand Programs	Unknown or No Response	Total
Less than 5,000	39 (6)	9 (1)	23 (1)	71 (8)
5,000 - 10,000	15 (3)	3 (1)	18 (5)	36 (9)
10,000 - 15,000	7 (4)	3 (2)	5 (1)	15 (7)
Over 15,000	4 (13)	2 (15)	1 (8)	7 (36)
Total	65 (26)	17 (19)	47 (15)	129 (60)

*Figures for NASULGC Institutions in parentheses.

Of the 334 programs to be added or expanded through 1979-80, 81.1 per cent (271) were to be of two years duration, as indicated in Table VII (see page 18). One hundred eighty-four (67.9 per cent) were two-year programs planned to be implemented by the end of the 1976-77 academic year.

TABLE VII

PROGRAM DURATION AND YEAR TECHNICAL EDUCATION PROGRAMS OF LESS-THAN-BACCALAUREATE LEVEL ARE TO BE ADDED OR EXPANDED IN INSTITUTIONS PRESENTLY OFFERING SUCH PROGRAMS*

Year Programs Are to be Added or Expanded in Institutions with Enrollment

Planned Program Duration	Less than 5,000							5,000 - 10,000							10,000 - 15,000							Over 15,000							Program Total
	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	
More than 3 years but less than 4																													
3 years			1				1		3					3															4
2 years	28 (4)	41 (4)	14 (2)	4 (3)		6 (3)	93 (16)	24	8 (1)	1 (1)			2 (1)	35 (3)	11 (3)	10 (2)	5 (1)	1		1 (2)	28 (8)	12 (15)	5 (16)	10 (8)	(9)	(11)	27 (61)	183 (88)
1 1/2 years			(1)	(1)			(2)																(3)				(3)	(5)	
1 year	6	5	1			1 (1)	13 (1)	2	2	2				6	2 (2)	1	1				4 (2)	(1)				(3)	(4)	23 (7)	
1/2 year	1	1					2		3					3														5	
Duration Unspecified	1	1	2				4	1	4	1				6	12					(1)	(1)			2			2	18 (1)	
Totals:																													
75-76	36 (4)							27							13 (5)							12 (16)						88 (25)	
76-77		48 (4)							20 (1)							11 (2)							5 (19)					84 (26)	
77-78			18 (3)							4 (1)							6 (1)							10 (8)				38 (13)	
78-79				4 (4)														1							2 (9)			7 (13)	
79-80																										(11)		(11)	
Year Unknown						7 (4)							8 (1)							1 (3)						(5)		16 (13)	
Program Total							113 (19)							59 (3)							32 (11)						29 (68)	233 (101)	

*Figures for NASULGC institutions in parentheses

Thirty-six, or 19 per cent, of the institutions currently offering less-than-baccalaureate level technical programs indicated that they did not plan to add or expand programs by 1978. The three reasons given most frequently were (1) technical education was a function delegated to other state institutions, (2) sufficient programs were presently offered, and (3) insufficient demand for additional programs (see Table VIII).

TABLE VIII

REASONS WHY LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAMS ARE NOT TO BE ADDED OR EXPANDED IN INSTITUTIONS PRESENTLY OFFERING SUCH PROGRAMS*

Reasons Given for No Addition or Expansion of Programs	Frequency of Response By Institutional Enrollment: Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000	Total
Insufficient funds Available	(1)	(1)	(1)	(3)	(6)
Technical education is a function delegated to other state institutions	1	2 (1)	2	2 (8)	7 (9)
Difficult to locate qualified staff	1 (1)				1 (1)
Lack of student interest in present programs	1 (1)	(1)			1 (2)
Insufficient demand for additional programs	5	1 (1)	(1)	(2)	6 (4)
Sufficient number of programs presently offered	4	1 (1)		(9)	5 (10)
Other	1	(1)	1		2 (1)
No Response		1		(1)	1 (1)
TOTAL	13 (3)	5 (6)	3 (2)	2 (23)	23 (34)

*Figures for NASULGC Institutions in parentheses

Addition of Less-Than-Baccalaureate Level Technical Programs in Institutions Not Presently Offering Such Programs

Very few of the 212 institutions not offering less-than-baccalaureate level technical programs planned to add programs by 1978. Only eight institutions indicated such plans (Table IX), and they planned only twenty programs (Table X, page ..). Table XI, page .., indicates that the two reasons given most frequently for not adding programs were: (1) Technical education was a function delegated to other state institutions, and (2) Technical education was inconsistent with institutional purposes.

TABLE IX

PLANS FOR ADDITION OF LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAMS IN INSTITUTIONS NOT OFFERING SUCH PROGRAMS AT PRESENT*

Institutional Enrollment	Plan To Add Programs	Do Not Plan To Add Programs	Unknown or No Response	Total
Less than 5,000	2	56 (2)	18 (5)	76 (7)
5,000 - 10,000	4	35 (7)	13 (2)	52 (9)
10,000 - 15,000	2	16 (7)	5 (1)	23 (8)
Over 15,000		11 (20)	2 (6)	13 (26)
TOTAL	8	118 (36)	38 (14)	164 (50)

*Figures for NASULGC Institutions in parentheses

TABLE X

PLANNED DURATION AND YEAR TECHNICAL EDUCATION PROGRAMS OF LESS-THAN-BACCALAUREATE LEVEL ARE TO BE ADDED IN INSTITUTIONS NOT CURRENTLY OFFERING THEM*

	Year Programs Are to be Added in Institutions with Enrollment																								
	Less than 5,000							5,000 - 10,000							10,000 - 15,000							Over 15,000						
Planned Program Duration	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	75-76	76-77	77-78	78-79	79-80	Year Unk.	Total	Total
More than 3, less than 4 years																												
3 years																												
2 years	1	3					4	1	5				1	7	2	1					3								14
1 year																												
1/2 year																												
Duration Unspecified											6			6														6
Totals:																												
75-76	1									7																		8
76-77		3							5						2													10
77-78																1												1
78-79																												
79-80																												
Year Unknown													1															1
Program Total							4							13							3							20

*Figures for NASULGC institutions in parentheses

TABLE XI

REASON WHY LESS-THAN-BACCALAUREATE LEVEL TECHNICAL EDUCATION PROGRAMS ARE NOT TO BE ADDED IN INSTITUTIONS NOT CURRENTLY OFFERING SUCH PROGRAMS*

Reasons Given for Not Adding Programs	Frequency of Response By Institutional Enrollment: Less than 5,000	5,000 to 10,000	10,000 to 15,000	Over 15,000	Total
Technical education is inconsistent with institutional purposes	29	11 (5)	6 (4)	6 (12)	52 (21)
Technical education is a function delegated to other state institutions	39 (2)	25 (2)	15 (2)	9 (13)	88 (19)
Insufficient funds available	5 (1)	2	2 (1)	1 (1)	10 (3)
Insufficient facilities available	5 (1)	2	2 (1)	1	10 (2)
Insufficient student interest in such programs	1		1		2
Insufficient demand in this geographical area for graduates of such programs	2	1	1		4
Faculty Opposition to such programs	2	2	1 (1)	1	6 (1)
Other	10	5	3	2 (2)	20 (2)
No Response	2	4 (1)	(1)	(2)	6 (4)
TOTAL	95 (4)	52 (8)	31 (10)	20 (30)	198 (52)

*Figures for NASULGC Institutions in parentheses

Trends from 1967-1975

When comparing the findings of the studies completed in 1967, 1971, and 1975 certain factors appear to be emerging with respect to less-than-baccalaureate level technical education programs.

The most obvious of these trends are the continued increases found in terms of all programs and enrollments at the less-than-baccalaureate level, a situation which holds for both AASCU and NASULGC institutions, as indicated in Table XII.

TABLE XII

CHANGES IN ENROLLMENT AND NUMBER OF LESS-THAN-BACCALAUREATE LEVEL PROGRAMS FROM 1967 to 1975*

	1967**	1971	1975	Change 1967-1971	Change 1967-1975	Change 1971-1975
Number of Programs		708 (389)	1462 (661)			up 106.5% (up 69.9%)
Total	619	1097	2123	up 77.2%	up 242.9%	up 93.5%
Enrollment		32,363 (24,782)	50,795 (55,136)			up 56.9% (up 122.5%)
Total	31,551	57,145	105,931	up 81.1%	up 235.7%	up 85.4%

**Data combined for AASCU and NASULGC Institutions

*Figures for NASULGC Institutions in parentheses

Closely related to these overall increases is the continuation of program and enrollment gains with respect to two-year programs (Table XIII). Furthermore, the proportion of programs at the one and two-year levels appears to remain as the largest component of all segments of the less-than-baccalaureate level offerings.

TABLE XIII

CHANGES IN ENROLLMENT AND NUMBER OF TWO-YEAR PROGRAMS FROM 1967 to 1975*

	1967**	1971	1975	Change 1967-1971	Change 1967-1975	Change 1971-1975
Number of Two-Year Programs		546 (313)	1038 (511)			up 90.1% (up 63.3%)
Total	505	859	1549	up 70.1%	up 206.7%	up 80.3%
Enrollment		25,128 (27,680)	44,107 (48,335)			up 75.5% (up 74.6%)
Total	25,668	52,808	92,442	up 105.7%	up 260.1%	up 75.1%

**Data Combined for AASCU and NASULGC Institutions

*Figures for NASULGC Institutions in parentheses

As revealed in Table XIV, the number of institutions offering technical education programs at all levels continues to increase. While the proportion of those having these programs remained almost identical through the 1967 and 1971 studies (65.6 per cent and 65.5 per cent respectively), the 1975 study reveals that the ratio has moved upward to where 76 per cent of the responding institutions offered these programs, an increase of 10.5 per cent.

Similarly, Table XIV also indicates that the number of institutions offering technical education programs at less-than-baccalaureate levels increased between 1967 and 1971, with further increases occuring between 1971 and 1975. Overall, the number of institutions offering these programs increased 64.9 per cent between 1967 and 1975.

TABLE XIV

CHANGES IN NUMBER OF INSTITUTIONS OFFERING TECHNICAL EDUCATION PROGRAMS

	Technical Education At All Levels					Technical Education At Less-Than-Baccalaureate Level				
	With Tech Ed. Programs		Without Tech Ed. Programs			With Tech Ed. Programs		Without Tech Ed. Programs		
	Number	Per Cent	Number	Per Cent	Total	Number	Per Cent	Number	Per Cent	Total
1967	185	65.6	97	34.4	282	114	40.4	168	59.6	282
1971	215	65.5	113	34.5	328	142	43.3	186	56.7	328
1975	304	76.0	96	24.0	400	188	47.0	212	53.0	400
Change 1967-71	up 16.2%					up 24.6%				
Change 1967-75	up 64.0%					up 64.9%				
Change 1971-75	up 41.4%					up 32.4%				

SIGNIFICANT FINDINGS

The following data from the 1975 study appear to be the most significant and have been compared with the 1967 and 1971 data as follows:

1. Seventy-six per cent of the 400 institutions responding to the 1975 study possessed technical education programs; whereas the 1967 and 1971 studies revealed that 65.6 and 65.5 per cent respectively of the responding institutions reported such programs. In terms of numbers of institutions, the 1975 study revealed a 64 per cent increase over 1967 and a 41.4 per cent increase over 1971.

2. Overall, the number of institutions offering less-than-baccalaureate level technical education programs increased from 114 in 1967 to 142 in 1971 and to 188 in 1975, an overall increase of 64.9 per cent. Of the 188 institutions (47 per cent) offering these programs, 129 (68.6 per cent) were AASCU institutions. This was 44.3 per cent of the total number (291) of responding AASCU institutions. NASULGC institutions offering such programs totaled 59 or 54.1 per cent of the 109 that responded.

3. With respect to programs of less-than-baccalaureate level, the 1975 study revealed that the 2123 programs reported constitute an increase of 242.9 per cent over the 619 programs reported in 1967 and a 93.5 per cent increase over the 1097 programs reported in 1971. Less-than-baccalaureate level programs in AASCU institutions have risen from 708 in 1971 to 1462 in 1975, an increase of 106.5 per cent. The number of these types of programs in NASULGC institutions rose from 389 in 1971 to 661 in 1975, a percentage increase of 69.9. AASCU institutions accounted for 68.9 per cent of the 2123 programs reported.

4. Most of the increases in the number of less-than-baccalaureate level programs are reflected by two-year programs which totaled 1549 (72.9 per cent) in the 1975 study. One-year programs accounted for an additional 11.1 per cent. This combined total percentage of 84 compares with 85.9 per cent in 1971 and 88.7 per cent in 1967.

5. The number of two-year technical education programs offered has increased from 505 in 1967 to 859 in 1971 and to 1549 in 1975, a percentage increase of 206.7 since 1967 and 80.3 per cent since 1971. AASCU institutions have exhibited

the highest portion of these changes by increasing the number of two-year programs from 546 in 1971 to 1038 in 1975 (90.1 per cent). NASULGC institutions have moved from 313 two-year programs in 1971 to 511 in 1975 (63.3 per cent). Similarly, the number of institutions offering two-year programs moved from 108 in 1967 to 132 in 1971 and to 177 in 1975, an increase of 63 per cent for the period 1967 to 1975.

6. Enrollments in less-than-baccalaureate level technical education programs were reported as 105,931 in 1975, an increase of 85.4 per cent over 1971 (57,145) and 235.7 per cent over the 31,551 so enrolled in 1967. Enrollments in AASCU institutions rose from 32,363 in 1971 to 50,795 in 1975, an increase of 56.9 per cent while enrollments in NASULGC institutions during the same period increased from 24,782 to 55,136 or 122.5 per cent.

7. In terms of enrollments in two-year programs, 92,442 students were reported in 1975. This represents a 260.1 per cent increase over the 25,668 enrollments reported in 1967 and a 75.1 per cent increase over the 52,808 students reported in 1971. AASCU institutions reported two-year enrollment increases from 25,128 to 44,107 (75.5 per cent) and NASULGC institutions reported enrollment increases from 27,680 to 48,335 (74.6 per cent) during the period 1971 to 1975.

8. Of the total enrollments reported, the data indicate that a great majority (87.3 per cent) were enrolled in two-year programs in 1975. Two-year enrollments in AASCU institutions accounted for 86.8 per cent of the total and for NASULGC institutions, 87.6 per cent. Although slight increases were shown, the data compare closely with 1971 and 1967 when 83.8 per cent and 81.4 per cent respectively were enrolled in two-year programs.

CONCLUSIONS

The interpretation of the data collected and presented by this study tends to support the following conclusions:

1. Member institutions of AASCU and NASULGC continue to be involved to a considerable extent in providing technical programs of less-than-baccalaureate level. Their involvement increased sharply between 1967 and 1971 and again by 1975.
2. Enrollments in less-than-baccalaureate level technical programs also increased dramatically between 1967 and 1971 and again by 1975. This trend was also clearly evident in both AASCU and NASULGC institutions.
3. Two-year technical programs continue to constitute the greatest portion of the less-than-baccalaureate level offerings at both AASCU and NASULGC institutions.
4. Enrollments in two-year technical programs constitute the great majority of all enrollments in programs of less-than-baccalaureate level at both AASCU and NASULGC institutions.
5. As 91 institutions indicated that they intend to add or expand 334 less-than-baccalaureate level programs prior to 1980, it would appear that further substantial increases in both programs and enrollments will be realized. A majority of the programs to be added are, as in the past, designed to be of two-year duration.
6. The most significant trend in the development of less-than-baccalaureate level technical programs continues to be the very sharp increases in both the number of programs and the student enrollment in these programs.